

OBITUARY

Prof. J. T. Patterson

JOHN THOMAS PATTERSON, emeritus professor of zoology in the University of Texas, who died on December 4, 1960, at the age of eighty-two, will be remembered especially for his work on evolutionary genetics of *Drosophila*, published as a series of "Studies in the Genetics of *Drosophila*" by the University of Texas and culminating in a book, *Evolution in the Genus *Drosophila** (1952), written in collaboration with Wilson S. Stone. Yet this great programme of work, involving the activities of numerous colleagues and graduate students, was initiated after he reached the age of sixty, in the evening of a long life devoted to biological teaching and research.

J. T. Patterson was born at Piqua, Ohio, on November 3, 1878. He received his bachelor of science degree from the College of Wooster in 1903 and his Ph.D. from the University of Chicago, where he was a student of C. O. Whitman, in 1908. He went to the University of Texas in Austin in 1908 as instructor in zoology, becoming adjunct professor in 1911, professor in 1913, 'distinguished professor' when this special rank was created in 1937, and emeritus professor on his retirement from teaching (but not from research) in 1955. He was one of the last of a great generation of Chicago Ph.D.'s in zoology that included such men as W. C. Allee, George Bartelmez, Carl Moore and Oscar Riddle.

When Patterson arrived at the University of Texas he found extremely primitive conditions in a frontier society. By his own efforts he built up the Department of Zoology, successively adding to the staff Carl Hartman, T. S. Painter and H. J. Muller. The bat-infested laboratory of the early years was replaced by the Biology Building in the 1920's and the magnificent Experimental Science Building in 1952. A total of thirty-one students received their M.A. degrees and twenty-nine their Ph.D.'s under Patterson's direction during the forty-eight years of his active teaching career in Texas. An extremely hard worker, he would arrive at the laboratory each morning about 6 a.m., spending the whole day in the big 'fly lab', at his microscope or talking with his students, with whom he had a very close personal relationship.

Patterson's early research was embryological. He studied the mechanism of development in the nine-banded armadillo, in which monozygotic quadruplets are invariably produced. From polyembryony in a mammal it was a natural step to studying polyembryony in the wasp *Paracopidosomopsis floridanus* Ashmead—a rolling name with which Patterson used to impress his elementary students, just as, in later years, he was able to silence an inquisitive Texas yokel by assuring him that his peculiar activities with an insect net were "collecting *Drosophila pseudoobscura* Frolova for my friend Professor Theodosius Dobzhansky".

Following on the discovery by Muller in 1927 of the mutagenic properties of X-rays, Patterson turned his attention to radiation genetics and worked

on somatic mutation, mosaicism, gynandromorphs and the production of deletions and translocations by X-rays. But by the middle 1930's his active and restless mind seemed to have tired of these lines of work and for a while he devoted himself to building up a great collection of the flint artefacts of Texas and the neighbouring States, on which he published several papers. At last, in 1938, he found his greatest field of activity in the evolutionary genetics of *Drosophila*. This was a few years after Painter had shown that the salivary gland chromosomes of *Drosophila* could be used for an entirely new type of cytogenetic analysis which permitted a detailed comparison of the gene sequences of different species. The idea seems to have suddenly struck Patterson that he wanted to study, not just *Drosophila melanogaster*, or even the dozen or so other species that had been employed until then by a few geneticists, but the whole range of species belonging to this genus of flies—200, 500 or however many there might be (we now know there are at least a thousand).

Collecting expeditions were sent out to all parts of the United States and Mexico and later to Central America, Canada, the Caribbean and the Pacific area. Hundreds of species were brought back to the Texas laboratory, which became a living museum of *Drosophila* stocks which were subjected by Patterson and his students to a great variety of genetic techniques designed to elucidate their relationships. Painter's salivary gland technique was fully exploited in this work. The results were too voluminous to be published in the regular journals, so that they appeared in the now famous *University of Texas Publications*, generously distributed free to institutions and individuals throughout the world. Both taxonomy and genetics acquired new perspectives as a result of this work, for which Patterson received the Daniel Giraud Elliott Medal of the U.S. National Academy of Sciences in 1951 (he had been elected to the Academy in 1941). His studies of the *virilis* group of species will always remain classical examples of this kind of work.

Short of stature, direct and forthright in speech, Patterson impressed one with his energy, exuberance and whole-hearted dedication to his science. He never travelled outside North America and seldom left Texas after his middle years, when he still used to spend the summers with his family at Woods Hole and participate in the main stream of American biology. Thus he became something of a legendary personality even in his own lifetime to the many younger biologists of the eastern States and the west coast who had never met him. He had little use for intellectual subtleties, and his work deals almost entirely with the big problems open to a frontal attack. Although he made no single discovery comparable in importance with those of Muller and Painter, he has an assured place in the history of genetics and evolutionary biology. His influence on the development of the University where he taught and worked for more than half a century was very great.

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